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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Stephan W. Wegerich

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22242 7590 10/22/2009  
FITCH EVEN TABIN & FLANNERY  
120 SOUTH LASALLE STREET  
SUITE 1600  
CHICAGO, IL 60603-3406

EXAMINER

GUILL, RUSSELL L

ART UNIT

PAPER NUMBER

2123

MAIL DATE

DELIVERY MODE

10/22/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/784,158	<b>Applicant(s)</b> WEGERICH ET AL.	
	<b>Examiner</b> Russ Guill	<b>Art Unit</b> 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21, 25-28, 31-37 and 50-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21, 25-28, 31-33, 35, 37, 50-54 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 34, 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is in response to an Amendment filed June 15, 2009. No claims were canceled or added. Claims 1 – 21, 25 – 28, 31 – 37, and 50 – 54 are pending and have been examined. Claims 34 and 36 have been objected to. **Claims 1 – 21, 25 – 28, 31 – 37, and 50 – 54 are allowable over the prior art of record.**

### *Response to Applicant's Remarks*

2. Regarding claims 1 – 21, 25 – 28, 31 – 37, 50 – 51 rejected under 35 USC § 101:
- 2.1. Applicant's arguments are persuasive, and the rejections are withdrawn. However, the claim amendments have caused claim objections below.

### *Claim Objections*

3. Regarding claim 34, the claim recites in line 2, "the process". Parent claim 32 does not appear to recite a process. The clarity of the claim would be improved by amending claim 33 to be compatible with parent claim 32.
4. Regarding claim 36, the claim recites in line 2, "the process". Parent claim 32 does not appear to recite a process. The clarity of the claim would be improved by amending claim 36 to be compatible with parent claim 32.

### *Allowable Subject Matter*

5. Following is a statement of reasons for indicating allowable subject matter:
6. While Black ("System Modeling and Instrument Calibration Verification with a Nonlinear State Estimation Technique") teaches receiving signals as input from a plurality of sensors as a set of training vectors; training an adaptive model using the

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training vectors; and Dougherty ("Supervised and Unsupervised Discretization of Continuous Features") teaches ordering the set of training vectors according to a corresponding value in each vector of a particular sensor; dividing the set of training vectors according to equally spaced ranges selected across the magnitude of the data, the magnitude forming the 'y' dimension of the data; selecting at least one vector from each of the equally spaced ranges for training the adaptive model; training the adaptive model with the vectors selected in the selecting step; and Freund ("Statistical Methods") teaches selecting less than all data to characterize a data set (page 591, Estimation); and Sung ("Example-Base Learning for View-Based Human Face Detection") teaches selecting a comprehensive but tractable set of training data; none of these references either alone or in combination with the prior art of record teaches a method of selecting input vectors for extraction of representative data for training of an adaptive model, and a system and method for monitoring a system instrumented with sensors, specifically including:

- 6.1. Regarding claim 1, "assigning each training vector a sequence number according to the ordering to form the 'x' dimension of the data with the sequence numbers", in combination with the remaining features and elements of the claimed invention;
- 6.2. Regarding claim 8, "wherein each observation is assigned a sequence number according to the ordering, the sequence numbers forming the 'x' dimension of the data", in combination with the remaining features and elements of the claimed invention;
- 6.3. Regarding claim 13, "assigning a sequence number to each said ordered vector according to the ordering, and using the sequence numbers to represent an 'x' dimension of data", in combination with the remaining features and elements of the claimed invention;

6.4. Regarding claim 26, "assigning each system snapshot a sequence number according to the order, and using the sequence numbers to form an 'x' dimension of data", in combination with the remaining features and elements of the claimed invention;

6.5. Regarding claim 32, "assigning a sequence number to each said ordered vector according to the ordering, and using the sequence numbers to form an 'x' dimension of data", in combination with the remaining features and elements of the claimed invention;

7. It is for these reasons that the claims distinguish over the prior art of record.

#### *Conclusion*

8. This application is in condition for allowance except for the following formal matters: Please refer to the claim objections above.

9. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

10. A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is (571)272-7955. The examiner can normally be reached on Monday – Friday 9:00 AM – 5:30 PM.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodrigues can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russ Guill

Examiner

Art Unit 2123

RG

/Paul L Rodriguez/

Supervisory Patent Examiner,

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